



Abandonment and Restoration Plan for the North 40 Metals Dump: introduction and table of content

Introduction

Indian and Northern Affairs Canada through their Inspector's Division requested that the City of Iqaluit undertake an Abandonment and Restoration Plan (A&R Plan) for the North 40 metals dump. The North 40 area is located in a valley on the North side of the existing airport and covers approximately 10 hectares. This area is also used as a quarry because of its natural gravel deposits and fractured rock producing gravel upon crushing. The central part of the North 40 area was and is presently used as a dump (referred to the metals dump). The main waste inputs to the metals dump originate from the following users:

- United States US Air Force during the Upper Base operational days (DEW Line site from the early 1950's until the base final closure in the 1970s) and;
- Iqaluit's residential, commercial, industrial and governmental sectors.

A visual survey of the metals dump indicates that the content is essentially composed of non-hazardous debris such as metal, wood, plane carcasses, motor vehicles and building demolition debris. Knowing that the US Air Force used the dump during Upper Base's operational days, one may expect the presence of hazardous waste such as Poly Chlorinated Byphenyl and lead amended paints from demolished interior and exterior building walls; asbestos; transformers; fuel and organic solvents. The metals dump is located yards from a creek carrying surface water from a northwestern located watershed to Frobisher Bay and from permanent water ponds eventually flowing towards Frobisher Bay. Even if there is no evidence of surface water contamination originating from the metals dump and that the City of Iqaluit has undertaken a large scale clean up of Upper Base residual waste in the 1990s, the proposed A&R Plan for the metals dump will determine if a contamination potential exists. Furthermore, the A&R Plan will detail actions suggested by the City of Iqaluit to permanently abandon and restore the metals dump.

The A&R Plan for the metals dump will follow all applicable Nunavut and Canadian laws and regulations. It will also follow pertinent parts of a DEW line landfill clean up protocol Agreement developed between Nunavut Tunngavik Inc. and the Department of National Defence. This Agreement was signed in 2001 and is now followed during DEW line remediation activities.



Table of contents for the metals dump A&R Plan

1.0 Metals dump and North 40 area historic review

- Includes details on previous and on-going activities at the North 40 area / metals dump and summarizes previous studies and engineering reports undertaken within this area.

2.0 Geological and hydrogeological conditions

- This section will summarily describe the geological and hydrogeological conditions prevailing within the metals dump area.

3.0 Identify the governing legislation and guidelines relating to this project

- This section will summarize Nunavut and Canadian laws, regulations and guidelines applicable to the abandonment and restoration of the metals dump.

4.0 A&R Plan of the metals dump based on the NTI-DND Agreement

- The pertinent and applicable sections of the *Clean up and restoration of DEW sites within the Nunavut Settlement Area* will be applied to the metals dumps. The environmental provisions of this Agreement will cover the following points:

4.1 Proceed with an Environmental Risk Assessment Matrix

- 4.1.1 Field investigation to identify contamination source
- 4.1.2 Exhaustive list of waste component of the dump
- 4.1.3 Pathways of contaminants
- 4.1.4 Impacts on terrestrial, aquatic and human receptors
- 4.1.5 Special conditions applying to the metals dump

4.2 Recommendations on pre clean-up delineation and confirmatory soil testing

4.3 Recommendations on the management of debris sorting

4.4 Off site contamination and debris

4.5 PCB and lead amended paints

4.6 Barrel management

4.7 Groundwater and geotechnical monitoring program

4.8 Site final grading

4.9 Liability and law / regulation / guideline amendments

5.0 Waste segregation: recycling / reuse options, non hazardous and hazardous waste

- Based on field observations and practical issues, the possibility of recycling non hazardous waste will be investigated.



6.0 Final recommendations for the A&R Plan based on field and risk assessment matrix investigations

- Recommendations are presented on how to address environmental issues related to the metals dump A&R Plan.

7.0 Submit A&R Plan of the metals dump to the Nunavut Water Board

- The A&R Plan, along with recommendations are submitted to the Nunavut Water Board